

hen the Royal Netherlands Air Force wanted to purchase full flight simulators and air trainers for its fleet, they wanted the best. So following in the footsteps of the United States Department of Defense, they turned to Colorado-based Pathfinder Systems, Inc. (PSI) – the same company that has been supplying the U.S. military innovative and cost saving solutions since 1985. Pathfinder Systems is a leading aircrew trainer supplier for helicopter and fixed wing aircraft. These high fidelity aircrew trainers provide initial training and continued proficiency to crew chiefs, gunners and loadmasters.

PHASE III SUCCESS

\$30 million total revenue stemming from SBIR-funded technologies; \$5.6 million in revenue in 2014

AGENCIES DOD

SNAPSHOT

This woman-owned, veteran-owned small business has delivered full-flight aircrew trainers and simulation solutions for the U.S. Army, Navy, Coast Guard, Marines, and several European nations.

PATHFINDER SYSTEMS, INC.

5525 W. 56th Avenue #400 Arvada, CO 80002

www.pathfindersystems.com (303) 763-8660

By developing complex displays housed within large simulators, the technology provides crewmembers the opportunity to get real-flight training off the battlefield. PSI's technology supports multiple aircraft, so crewmembers can train on various platforms within one simulator. Actual effects such as engine sounds, aerodynamic noise, and weapon fire are all reproduced to support training realism.

A rich history with the Small Business Innovation Research (SBIR) program has allowed the company to evolve from designing simulation software for the Army in the 80s to building and delivering fully integrated systems to a broad range of government and commercial customers. All of PSI's systems today contain facets of its original SBIR-funded technologies.

"We first got started with SBIR in the 90s, when the program was still pretty new," recalls Sheila L. Jaszlics, President of Pathfinder Systems. "The one that really helped us take off was a project for a helicopter operations aircrew chief trainer in 2006. We were able to get a Phase II award to apply the technology to an aircrew trainer for the Army and after that, we got Phase III funds from both the Army and the Navy to build our very first simulator."

Not long thereafter, the U.S. Army enlisted PSI to build a new device – the Non-rated Crew Member Trainer (NCMT) – to support the Army's UH-60 and CH-47 helicopter aircrews. This effort produced a fully deployable system consisting of two aircrew trainers in a single 53-foot expandable tractor-trailer. The system supports gunnery training, crew coordination, multi-ship training and mission rehearsal as well as training for external load operations. While only anticipating one year of service, the simulator was successfully used within the fleet for four years.

A subsequent Phase III contract with the U.S. Coast Guard in its Aviation Training Center in Mobile, AL soon followed to deliver simulators along with aerial weapons trainers. This system, called the U.S. Coast Guard Aircrew Weapons Trainer (CGAWT), is a motion-based simulator supporting USCG armed helicopter aircrew training. Accommodating various on-board weapons employed by the Coast Guard, it can interchange between the MH-60C and MH-60J aircraft.

PSI's Marine Common Aircrew Trainer – Prototype 2 (MCAT-P2) is the current system being used by the Marines and the company has now joined forces with one of the largest defense companies to fulfill an order of 8 units. The MCAT-P2 trains CH-53E, MV-22B and UH-1Y enlisted aircrew in crew coordination, aerial gunnery and external load handling skills. PSI is also currently building 3 EAET units for the Marines and Navy, which trains aircrews in CH-53E and MH-53E external load operations.

Pathfinder Systems was awarded the 2015 Exporter of the Year – Region VIII honor from the U.S. Small Business Administration. Commercial clients include powerhouses like Lockheed Martin, BAE Systems, and Northrop Grumman to name a few. Looking forward, PSI wants to continue its quest to provide simulators to its customers, but is also looking to expand its platform of simulated weapons to integrate on the systems.

"Right now, we are optimizing our current simulators so that they are easier to convert from one aircraft to the other," adds Jaszlics. "We are also focusing on improving the simulated weapons for helicopters and aerial gunnery training while exploring ways to make those weapons more reliable and easy to maintain."

The company currently employs 30 people, and recently expanded its offices in Arvada, Colorado, to accommodate the growth. PSI has identified additional commercial applications for its simulated weapons systems and is in talks with several NATO countries about delivering trainers. Sheila and her husband, PSI Co-Founder Ivan Jaszlics, are sought-after experts in the field of augmented reality and battlefield simulation and speak nationally on the topics.







Left: An MV-22B Osprey assigned to Marine Medium Tiltrotor Squadron 365 (Reinforced) takes off from the flight deck of the amphibious transport dock ship USS New York (LPD 21). Pathfinder Systems' simulators (right side) show the CH-53E interoperating with MV-22B.